

Remarks

As stated above, the applicant appreciates the examiner's thorough examination of the subject application and requests reexamination and reconsideration of the subject application in view of the preceding amendments and the following remarks.

The Examiner objects to a typographical error appearing on page 9, line 25 of the subject application. In response to this objection, the applicant has amended the specification to address the issue raised by the Examiner.

Concerning Items 1-2 of the subject action, the Examiner rejects claims 13-15, under 35 USC §102, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. In response to this rejection, the applicant has amended claims 13-15 to address the issue raised by the Examiner.

Concerning Items 3-4 of the subject action, the Examiner rejects claims 1-3, 11-12, and 20-21, under 35 USC §102(e), based on the teachings of Doucette (US Patent No. 6,108,346; herein after Doucette).

Applicants claim (in amended claim 1):

a system for transmitting and receiving TDM control data in a TDM communication network, comprising: a single master control source for providing the TDM control data; and, one or more slave TDM multiplexors within the TDM communications network, communicating via a TDM signal, each of the slave TDM multiplexors including (i) a transmitter component for accepting the TDM control data from the master control source, and inserting the TDM control data into the TDM signal; (ii) a receiver component for extracting the TDM control data in the TDM signal and passing the TDM control data to a local control processor; and, (iii) a bridging component for passing TDM control data along to the next TDM multiplexor, independent of the local control processor.

Applicants respectfully assert that Doucette fails to disclose a system for “transmitting and receiving TDM control data”. Accordingly, the applicants respectfully assert that the Doucette is not a proper basis for a 35 USC §102(e) rejection, as the references fails to disclose each and every element of the applicants' claimed invention.

Specifically, the background of the subject application discloses that:

TDM systems provide a convenient method of transporting multiple channels of

digital data via a single physical link. T1 and E1 are two exemplary TDM protocols well known to those in the art. The simplest form of a TDM communication system is a point to point system 10 with two TDM multiplexors 12 electrically coupled by some physical media 14 (e.g., an electrical cable), as shown in FIG. 1. *See the subject application, page 2, lines 18-22.*

Concerning the "TDM control data" of claim 1 of the subject application, the subject application discloses that:

the control data (also referred to herein as control signals) originates at a master control source 102 and is distributed to two or more TDM multiplexors within the TDM communications network 104. A first TDM multiplexor 106 within the network 104 receives the control data as one or more control signals from the master control source via a control communications link 107, through a control port 108. *See the subject application, page 7, lines 9-13.*

Further, the subject application discloses that:

The first TDM multiplexor 106 further includes a transmit interface device 118 in the first TDM multiplexor 106 for receiving the one or more control signals from the control port 108, and inserting the control signals into appropriate time position within the TDM signal. In the embodiment shown in FIG. 2, the transmit interface device 118 (also referred to herein as a transmitter component) cooperates with the TDM signal generator 114 to insert the control data into the TDM signal, although in other embodiments, the transmit interface device 118 may operate independent of the TDM signal generator 114 to insert the control data into the TDM signal. *See the subject application, page 7, line 24 – page 8, line 4.*

Accordingly, the applicants disclose and claim a system that transmits, receives and processes TDM control data, such that the TDM control data allows for the multiplexing and demultiplexing of multiple channels of data transmitted via a single network connection.

Quite differently, the Doucette system discloses a method of transmitting synchronous and asynchronous data. Doucette discloses the following:

A "control character" consists one byte. The specific byte that forms each control character is selected from the decodes which do not form data words. There are three control characters which are used to implement the present invention. One control character indicates the start of a window, a second indicates the end of synchronous data transfer, and the third indicates the end of a window. When a module receives a control character it immediately retransmits the character to the next module in the ring.

A "token" consists of two bytes of data. As with control characters, the specific bytes that form each token are selected from the decodes which are not otherwise assigned. When a module receives a token, it only retransmits the token to the next module if certain conditions have been met. There are two tokens used in the implementation of the present invention. One token indicates that a module should begin transmitting its synchronous data and the second indicates that a module should begin transmitting asynchronous data. A module only passes a token to the next module after a module that receives a token has completed the task initiated by the token.

A "timing character" consists of one byte. This one byte is selected from the decodes not otherwise assigned. *See Doucette, column 3, lines 6-28.*

Concerning the prioritization and sequencing between synchronous and asynchronous data, Doucette discloses that:

Each window 50 begins with a "start window" control character or field 52 (which is one byte long). The start window control character indicates the onset of a window 50. The remainder of each window 50 is dedicated first to all pending synchronous data transmissions and then to asynchronous data transmissions. More particularly, a first portion 54 of each window 50 is dedicated to exchange of all pending synchronous data packets 25. After all pending synchronous data packets 25 have been exchanged among modules 10, a second control character (not explicitly shown in FIG. 3) is transmitted around the ring to indicate the end of the synchronous transmissions. A second portion 56 of each window 50 is dedicated to exchange of asynchronous data packets 35. At the end of each window another control character (not explicitly shown in FIG. 3) is transmitted around the ring. As will be explained later, tokens and timing characters are also transmitted around the ring. *See Doucette, column 5, lines 20-36.*

Therefore, Doucette discloses that synchronous data is transmitted first and, upon completion, asynchronous data is transmitted second, such that "control characters" regulate the transmission of data and the switching between the various data types. However, Doucette fails to disclose a system that multiplexes multiple channels of data onto a single network connection and demultiplexes multiple channels of data from the single network connection, such that the multiplexing and demultiplexing processes are controlled via TDM control data signals.

Accordingly, applicants respectfully assert that Doucette is not a proper basis for a 35 USC §102(e) rejection, as the reference fails to disclose each and every element of the applicants' currently amended claim 1. Therefore, the applicants respectfully assert that independent claim 1 is patentable

over the cited reference. Further, as dependent claims 2-3, and 11-12 depend (either directly or indirectly) upon independent claim 1, applicants respectfully assert that claims 2-3, and 11-12 are also patentable over the cited reference.

Applicants claim (in amended claim 20):

a method of distributing TDM control data in a TDM communications network, from a master control source to two or more TDM multiplexors within the TDM communications network, comprising: receiving one or more TDM control signals from the master control source; inserting the one or more TDM control signals into the TDM signal at the first TDM multiplexor; and, extracting the TDM control signals from the TDM signal at each of the remaining TDM multiplexors, and providing the TDM control signals to an associated TDM multiplexor control processor.

For the reasons discussed above, applicants respectfully assert that Doucette is not a proper basis for a 35 USC §102(e) rejection, as the reference fails to disclose each and every element of the applicants' currently amended claim 20. Therefore, the applicants respectfully assert that independent claim 20 is patentable over the combination of cited references. Further, as dependent claim 21 depends upon independent claim 20, applicants respectfully assert that claim 21 is also patentable over the cited reference.

Concerning Items 5-6 of the subject action, the Examiner rejects claims 4, 5-6, 7-10, and 13-19, under 35 USC §103(a) based on the combination of Doucette and one of: Lebiay et al (US Patent No.: 5,602,841; herein after Lebizay); Eidson (US Patent No.: 6,370,159; hereinafter Eidson); Lang et al (US Patent No.: 6,188,699; hereinafter Lang); and Ohara et al (US Patent No.: 5,768,282; herein after Ohara).

For the reasons discussed above, applicants respectfully assert that independent claim 1 is patentable over Doucette. Accordingly, as dependent claims 4, 5-6, 7-10, and 13-19 all depend (either directly or indirectly) upon independent claim 1, the applicants respectfully assert that dependent claims 4, 5-6, 7-10, and 13-19 are patentable over the combination of Doucette and any of Lebizay, Eidson, Lang and Ohara.

Summarizing, claims 1-21 are pending in the subject application, of which claims 1-4, 11, 13-17, and 20-21 are currently amended, and claims 5-10, 12, and 18-19 are original. No new matter has been added by these amendments. The applicant respectfully asserts that the subject application

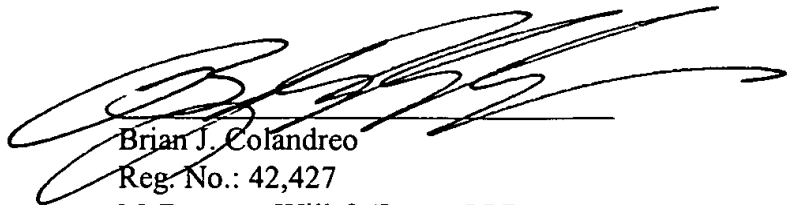
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If the Examiner believes there are any outstanding issues to be resolved with respect to the above-identified application, the Examiner is invited to telephone the undersigned at their earliest convenience so that such issues may be resolved telephonically.

Respectfully submitted,

Date:

7 September 2004



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